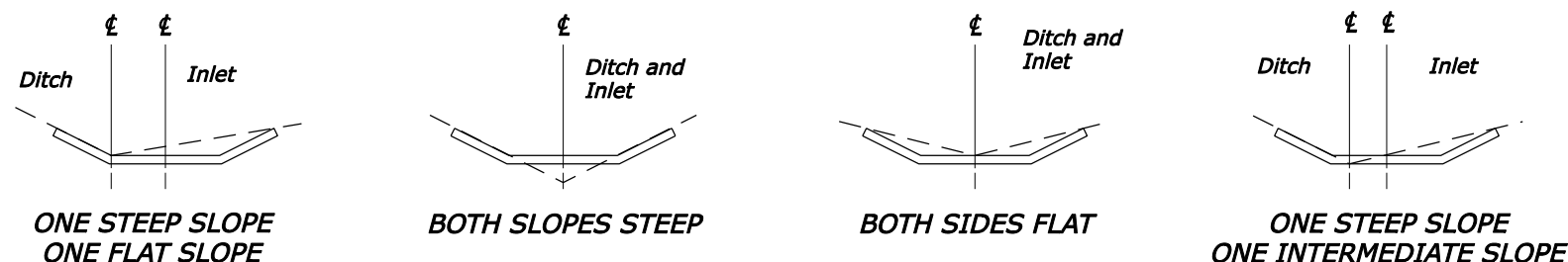
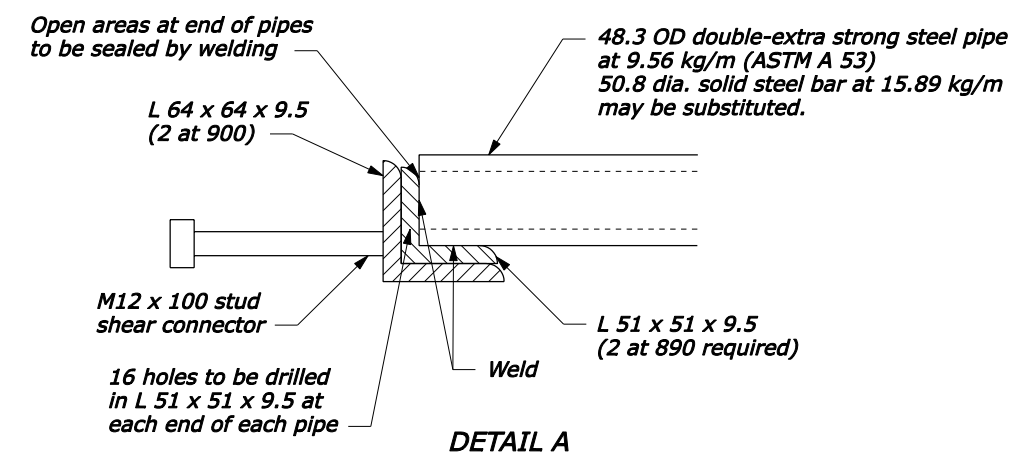
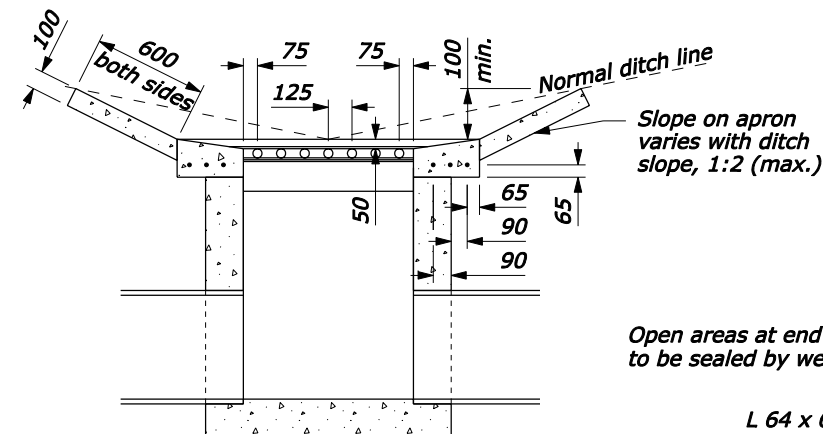
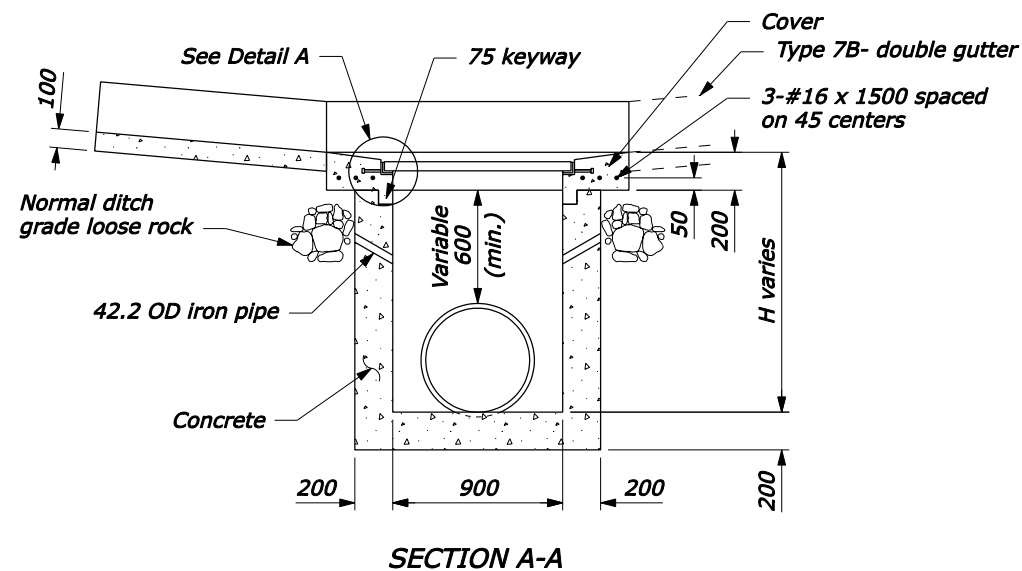


NOTE:

1. *Type 7A has a single gutter when inlet is on a grade.*
2. *Type 7B has a double gutter when inlet is in a sag between two grades.*
3. *Ditch to be warped to tie smoothly into inlet gutter.*
4. *Outside dimensions of grate to be 1000 x 890 mm.*
5. *Maximum depth (H) is 3800 mm.*
6. *All reinforcing bars are #16 placed a minimum 40 mm clear from face of concrete. In floors, place bars on 150 mm centers each way. In walls, place horizontal bars on 150 mm centers and vertical bars on 300 mm centers.*
7. *Galvanize grate after fabrication in accordance with AASHTO M 111.*
8. *Alternate methods of anchoring angle iron will be acceptable if approved by the CO.*

Dimensions without units are millimeters.

APPROXIMATE QUANTITIES						
Pipe size	300	375	450	600	750	900
Minimum Depth (H)	600	690	775	940	1100	1270
Inlet concrete for minimum depth, m ³	0.724	0.799	0.874	1.024	1.174	1.323
Additional inlet concrete	0.264 m ³ for each additional 300 mm of depth (H)					
Gutter concrete	Type 7A: 0.528 m ³ Type 7B: 0.864 m ³					
Cover concrete (not included above)	0.323 m ³					
Cover reinforcing steel	28.5 kg					



TYPICAL GUTTER PLACEMENT

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
METRIC STANDARD INLET TYPE 7A AND 7B FOR 300 TO 900 CULVERT	
STANDARD APPROVED FOR USE 3/1996 REVISED: 5/1997 6/2005	STANDARD M604-8